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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

FENG CHEN

Serial No. 10/661,287 (TI-35766)

Filed September 12, 2003

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4-28-06

Jav M. Cantor, Reg. No. 19,906

For: SIGMA-DELTA MODULATOR USING A PASSIVE FILTER

Art Unit 2819

Examiner Howard L. Williams

Customer No. 23494

Mail Stop Appeal Brief-Patents  
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Sir:

**REPLY BRIEF**

In reply to the Examiner's Answer, it is respectfully submitted that the argument previously presented has not only not been refuted, but has been ignored. As stated in the Brief on Appeal, all of the rejected independent claims (claims 1, 9 and 17) require a pair of analog input currents [ $V_{INP}$ ,  $V_{INM}$ ] with the selection of the one of the pair of input currents being responsive to the digital output of the quantizer [18]. No such feature is taught or suggested by any of the cited references. This feature is discussed in detail at page 13ff.

With reference to the examiner's response to argument, the discussion relative to the Chen article has no bearing on this appeal and merely obfuscates the issues herein. The mention

of the fact that the article is by the applicant herein was to indicate that the subject invention is an improvement of the subject matter of that article and nothing more.

With reference to the filter in Benabes Fig. 3, while this filter has all passive elements, that is not what is being claimed. A feature of the invention, in addition to the feature discussed above, is the fact that a sigma-delta modulator is provided which does not require active components. A sigma-delta modulator is not a filter though it contains filters.


With reference to the examiner's arguments in the first paragraph of page 5, it is apparent that there is no showing of a circuit as claimed at all stages of a sigma-delta modulator. Furthermore, that is not the principal feature being claimed, but rather the feature as discussed in the first paragraph of this paper.

With reference to the argument on page 5, second paragraph, it is again noted that Benabes et al. clearly state at the top of column 2, lines 2 and 3 that "[t]his approach will be applied in the case of filters using only resistors and capacitors elements". Filters are not sigma-delta modulators.

In summary, the cited prior art nowhere teaches or suggests a pair of analog input currents [ $V_{INP}$ ,  $V_{INM}$ ] with the selection of the one of the pair of input currents being responsive to the digital output of the quantizer [18].

For the reasons stated above as well as in the Brief on Appeal, reversal of the final rejection and allowance of the claims on appeal is requested that justice be done in the premises.

Respectfully submitted,

  
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